

臺北榮民總醫院 高警訊藥品品項

藥學部整理 095.06.01初版

109.03.02修訂

自 94 年 5 月 20 日起本院藥名特別嵌入「#」警示記號，提醒醫療人員加強確認處方。# 記號表示高警訊藥品 (high-alert medications，美國 ISMP (Institute for Safe Medication Practices) 定義高警訊藥品共有 22 類及 12 項特定品項。例如 Tramal retard # tab 100 mg (Tramadol) 表示此藥為高警訊藥品。欲減少用藥疏失及增進用藥安全，必須在用藥過程的各個環節加入防誤機制，藥名嵌入「#」記號可在醫師開立處方、藥師調劑、護理給藥、病人用藥、用藥後追蹤、藥品庫儲管理等環節，提供醫療人員加強注意確認，此創新作為應是預防用藥疏失並提昇用藥安全的有效方法之一。茲依據 ISMP 定義整理出本院高警訊藥品品項如表一、表二 (定期每月更新一次)。

依100年6月1日第128次藥事會決議，高警訊藥品之中，具接觸性細胞毒性之化療針劑、intravenous insulin infusion (IVII)、靜脈輸注之高單位heparin針劑、digoxin針劑、高濃度氯化鉀 (KCl) 針劑及神經肌肉阻斷注射劑(Esmeron® , Nimbex® , Relaxin®)，統稱為高危險藥品(high-risk medications)，護理給藥時需有兩位護理人員共同核對並簽名(double check, double sign)。

表一、22 類應提高警覺之藥品

藥品分類	本院現有品項
Adrenergic agonists, IV	Dopamin® (Dopamine) inj 200 mg/5 ml/amp Ephedrine® (Ephedrine) inj 40 mg/1 ml/amp Epinephrine® (Epinephrine) inj 1 mg/1 ml/amp Gendobu® (Dobutamine) inj 12.5 mg/ml 20 ml/vial Gipamine® (Dopamine 600 mg + D5W) inj 200 ml/bag Levophed® (Norepinephrine) inj 4 mg/4 ml/vial Norepinephrine® (Norepinephrine) inj 4 mg/4 ml/vial (替代 Levophed®) Precedex® (Dexmedetomidine) inj 100 mcg/ml 2 ml Proteranol-L® (Isoproterenol) inj 0.2 mg/ml 1ml Yutopar® (Ritodrine) inj 50 mg/5 ml/amp
Adrenergic antagonists, IV	Trandate® (Labetalol) inj 5 mg/ml 5 ml/amp
Anesthetic agents, general, inhaled and IV	Aerrane® (Isoflurane) inh 100 ml/bot Anesvan® (Propofol) inj 500 mg/50 ml/bot Citosol® (Thiamylal) inj 300 mg/vial Etomidate-lipuro® (Etomidate) inj 20 mg/10 ml/amp Fresofol® (Propofol) MCT/LCT inj 2% 50 ml/bot Ketalar® (Ketamine) inj 500 mg/10 ml/vial Propofol-Lipuro® “N” (Propofol) inj 1% 200 mg/20 ml Suprane® (Desflurane) inh 240 ml/bot Ultane® (Sevoflurane) inh 250 ml/bot
Antiarrhythmics, IV	Adenocor® (Adenosine) inj 3 mg/ml 2ml Esmolol® (Esmolol HCl) inj 10 mg/ml 10 ml Cordarone® (Amiodarone) inj 150 mg/3 ml/amp Herbesser® (Diltiazem) inj 50 mg/amp U-Sodin® (Verapamil) inj 5 mg/2 ml/amp (替代 Verpamil) Verpamil® (Verapamil) inj 5 mg/2 ml/amp Xylocaine® (Lidocaine) inj 2% 5 ml/amp
Antithrombotic agents	

Warfarin	Cofarin [®] (Warfarin) 1 mg/tab Orfarin [®] (Warfarin) 5 mg/tab
Heparin, low molecular weight, injection	Clexane [®] (Enoxaparin) inj 2000 antiXa iu/0.2 ml/syringe Clexane [®] (Enoxaparin) inj 6000 antiXa iu/0.6 ml/syringe
Heparin, unfractionated, IV	Agglutex [®] (Heparin) inj 5000 U/ 5 ml/vial Agglutex [®] (Heparin) inj 25000 U/ 5 ml/vial Hepac lock [®] (Heparin) flush 100 USP units/ml 10 ml/syringe
Factor Xa inhibitors	Eliquis [®] (Apixaban) FC tab 5 mg Eliquis [®] (Apixaban) FC tab 2.5 mg Lixiana [®] (Edoxaban) FC tab 30 mg Lixiana [®] (Edoxaban) FC tab 60 mg Xarelto [®] (Rivaroxaban) FC tab 10 mg Xarelto [®] (Rivaroxaban) FC tab 15 mg Xarelto [®] (Rivaroxaban) FC tab 20 mg
Direct thrombin inhibitors	Argatra [®] (Argatroban) inj 100 mg/ml 2.5 ml Pradaxa [®] (Dabigatran) 75 mg/cap Pradaxa [®] (Dabigatran) 110 mg/cap Pradaxa [®] (Dabigatran) 150 mg/cap
Thrombolytics/fibrinolytics, IV	Actilyse [®] (Tissue plasminogen activator) inj 50 mg/50 ml/vial Urokinase [®] -Green Cross (Urokinase) inj 60000 iu/vial
Glycoprotein IIb/IIIa inhibitors	Aggrastat [®] (Tirofiban) inj 12.5 mg/50 ml/bot
Cardioplegic solutions	Plegisol [®] solution 1000 ml
Chemotherapeutic agents, parenteral and oral	Abraxane [®] (Paclitaxel albumin-bound) inj 100 mg/vial Adriablastina [®] (Doxorubicin) inj 10 mg/5 ml/vial Adriamycin [®] (Doxorubicin) inj 10 mg/ 5 ml/vial Adcetris [®] (Brentuximab) inj 50 mg/vial Alecensa [®] (Alectinib) 150 mg/cap Alkeran [®] (Melphalan) 2 mg/tab Alkeran [®] (Melphalan) inj 50 mg/10 ml/vial Alimta [®] (Pemetrexed) inj 500 mg/vial Alimta [®] (Pemetrexed) inj 100 mg/vial Asadin [®] (Arsenic trioxide) inj 10 mg/10 ml/vial Besponsa [®] (Inotuzumab ozogamicin) inj 1 mg/vial BiCNU [®] (Carmustine) inj 100 mg/3 ml/vial Bleocin [®] (Bleomycin) inj 5 mg/amp Bleocin [®] (Bleomycin) inj 15 mg/vial Blinicyto [®] (Blinatumomab) inj 35 mcg/vial Busulfex [®] (Busulfan) inj 60 mg/vial Campto [®] (Irinotecan) inj 100 mg/5 ml/vial Carmuther [®] (Carmustine) inj 100 mg/vial Cecenu [®] (Lomustine) 40 mg/cap Cosmegen [®] (Dactinomycin) inj 500 mcg Cytosar [®] (Cytarabine) inj 500 mg/vial Cytarabine [®] (Cytarabine) inj 1000 mg/10 ml/vial Dacarbazine [®] (Dacarbazine) inj 200 mg/vial Dactilon [®] (Dactinomycin) inj 0.5 mg/vial Daunoblastina [®] (Daunorubicin) inj 20 mg/vial Eloxatin [®] (Oxaliplatin) conc. soln for infu. 50 mg Endoxan [®] (Cyclophosphamide) inj 200 mg/vial Endoxan SC [®] (Cyclophosphamide) 50 mg/tab Evoltra [®] (clofarabine) inj 20 mg/vial

Fytosid® (Etoposide) inj 100 mg/5 ml/vial
Fludara® (Fludarabine) inj 50 mg/vial
Fluoro-uracil® (5-Fluorouracil) inj 1 g/20 ml/vial
Folotyn® (Pralatrexate) inj 20 mg/1 ml
5-Fu® (5-Fluorouracil) inj 1 g/20 ml/vial (取代Fluoro-uracil)
Gemzar® (Gemcitabine) inj 200 mg/vial
Genetaxyl® cremless (Paclitaxel) inj 30 mg/5 ml/vial
Gliadel® wafer (Carmustine 7.7 mg/polifeprosan-2019 2.3 mg)
Halaven® (Eribulin) soln for # inj 0.5 mg/ml 2 ml
Holoxan® (Ifosfamide) inj 2 g/vial
Hycamtin® (Topotecan) inj 4 mg/vial
Hydrea® (Hydroxyurea) 500 mg/cap
Herceptin® (Trastuzumab) inj 440 mg/vial
Herceptin® (Trastuzumab) SC inj 600 mg/5 ml
Innomustine® (Bendamustine) inj 100 mg
Ixempra® (Ixabepilone) inj 15 mg
Kemoplat® (Cisplatin) inj 50 mg/50 ml/vial
Kadcyla® (Trastuzumab Emtansine) inj 100 mg/vial, 160 mg/vial
Kyprolis® (Carfilzomib) inj 60 mg/vial
Leukeran® (Chlorambucil) 2 mg/tab
Leunase® (Asparaginase-L) inj 10000 iu
Lipo-Dox liposome® (Doxorubicin) inj 20 mg/10 ml/vial
Lysodren® "Corden" tab 500 mg (Mitotane)
Merkaptopurin® (Mercaptopurine) 50 mg/tab
Melphather® (Melphalan) inj 50 mg/10 ml
Methotrexate® (Methotrexate) 2.5 mg/tab
Methotrexate® (Methotrexate) inj 1 g/10 ml/vial
Methotrexate® (Methotrexate) inj 500 mg/5 ml/vial (替代原品項)
Methotrexate® (Methotrexate) inj 50 mg/2 ml/vial (替代原品項)
Mitomycin-C® (Mitomycin-C) inj 10 mg/vial
Mitoxantrone® (Mitoxantrone) inj 20 mg/10 ml/vial
Myleran® (Busulfan) 2 mg/tab
Natulan® (Procarbazine) 50 mg/cap
Navelbine® (Vinorelbine) inj 10 mg/1 ml/vial
Navelbine® soft (Vinorelbine) 20 mg/cap
Navelbine® soft (Vinorelbine) 30 mg/cap
OncoTICE® (Bacillus Calmette Guerin) 50 mg
Oxalip® (Oxaliplatin) inj 50 mg/10 ml/vial
Onivyde® (Irinotecan HCl liposome) inj 50 mg/10 ml/vial
Paraplatin® (Carboplatin) inj 150 mg/vial
Pharmorubicin® (Epirubicin) inj 10 mg/vial
Pharmorubicin® (Epirubicin) inj 50 mg/vial
Pharmorubicin® (Epirubicin) (TACE) inj 50 mg/vial
Pharmorubicin® (Epirubicin) (TACE) inj 10 mg/vial
Perjeta® (Pertuzumab) inj 420 mg/vial
Pomalyst® (Pomalidomide) 4 mg/cap
Revlimid® (Lenalidomide) cap 10 mg
Revlimid® (Lenalidomide) cap 25 mg
Taxol® (Paclitaxel) inj 30 mg/5 ml/vial
Taxotere® (Docetaxel) infu 20 mg/1 ml
Tamos® (Temozolomide) 100 mg/cap

	<p> Temodal® (Temozolomide) 20 mg/cap Temodal® (Temozolomide) 100 mg/cap Tepadina® (Thiotepa) inj 15 mg/vial Tepadina® (Thiotepa) inj 100 mg/vial Torisel® conc.(Temsirrolimus) for # inj 30 mg/1.2 ml Topotecan® (Topotecan) inj 4 mg/vial (替代 Hycamtin®) TS-1® (Tegafur 20 mg + Gimeracil 5.8 mg + Oteracil 19.6 mg) 20 mg/cap TS-1® (Tegafur 25 mg + Gimeracil 7.25 mg + Oteracil 24.5 mg) 25 mg/cap Tagrisso® (Osimertinib) 80 mg/tab UFUR® (Tegafur 100 mg + Uracil 224 mg) /cap Velcade® "France" (Bortezomib) for inj 3.5 mg Venclexta® starting pack (Venetoclax 10 mg/50 mg/100 mg) Venclexta® (Venetoclax) 100 mg/tab Vepesid® (Etoposide) 50 mg/cap Vesanoïd® (Tretinoin) soft cap 10 mg Vidaza® (Azacitidine) inj 100 mg/vial Vinblastine-DBL® (Vinblastine) inj 10 mg/10 ml/vial Vincristine-DBL® (Vincristine sulphate) inj 1 mg/1 ml Yondelis® (Trabectedin) inj 1 mg/vial Zavedos® (Idarubicin) inj 5 mg/vial Zavedos® (Idarubicin) cap 5 mg Zykadia® (Ceritinib) 150 mg/cap </p>
Dextrose, hypertonic, 20% or greater	<p> Dextrose® (Dextrose) inj 50% 500 ml/bag Vitagen® (Dextrose) inj 50% 20 ml/amp Glucose® (Dextrose) inj 50% 20 ml/amp (替代 Vitagen) </p>
Dialysis solutions, peritoneal and hemodialysis	<p> Bibag® (Sodium bicarbonate) powder 650 g Extraneal® (Icodextrin) PD 7.5% 2 L </p>
Epidural or intrathecal medications	<p> Marcaine® spinal (bupivacaine) inj 0.5 % 4 ml/amp Gablofen® (Baclofen) inj 50 mcg/1 ml Gablofen® (Baclofen) inj 10000 mcg/20 ml Gablofen® (Baclofen) inj 20000 mcg/20 ml Gablofen® (Baclofen) inj 40000 mcg/20 ml Spinraza® (Nusinersen) inj 12 mg/5 ml </p>
Hypoglycemics, oral	<p> Actos® (Pioglitazone) 30 mg/tab Amaryl® (Glimepiride) 2 mg/tab Ansures ER® (Metformin) 500 mg/tab Canaglu® (Canagliflozin) 100 mg/tab C.T.L. XR® (Metformin) 500 mg/tab (替代 Ansures) Deglu® (Acarbose) 50 mg/tab (替代 Glucobay) Diamicon MR® (Gliclazide) 60 mg/tab Diamin® (Gliclazide) 80 mg/tab Galvus® (vildagliptin) 50 mg/cap Glurenorm® (Gliquidone) 30 mg/tab Glucobay® (Acarbose) 50 mg/tab Glucobay® (Acarbose) 100 mg/tab Glucophage® (Metformin) 500 mg/tab Glufast® (Mitiglinide calcium hydrate) 10 mg/tab Januvia® FC (Sitagliptin) 100 mg/tab </p>

	<p>Nesina[®] FC (Alogliptin) 25 mg/tab Novonorm[®] (Repaglinide) 1 mg/tab Onglyza[®] (Saxagliptin) 5 mg/tab Starlix[®] (Nateglinide) 120 mg/tab Trajenta[®] FC (Linagliptin) 5 mg /tab Jardiance[®] FC (Empagliflozin) 25 mg/tab Forxiga[®] FC (Dapagliflozin) 10 mg/tab</p>
Inotropic medications, IV	<p>Lanoxin[®] (Digoxin) inj 0.5 mg/2 ml/amp Primacor[®] (Milrinone) inj 10 mg/10 ml/ amp Simdax[®]conc. (Levosimendan) for Sol infu 2.5 mg/ml 5 ml</p>
Insulin, subcutaneous and IV	<p>Apidra[®] sol for pen (Insulin glulisine) 100 u/ml 3 ml Humalog Mix 25 penfill[®] (Insulin lispro) 300 IU/3 ml Humulin-N (NPH Human Insulin) inj 1000 iu/10 ml Humulin-R (Regular Human Insulin) inj 1000 iu/10 ml Insulatard HM (Insulin NPH-HM) inj 100 iu/ml 10 ml Insulin actrapid HM (Insulin regular-HM) inj 100 iu/ml 10 ml Lantus[®] pen (Insulin glargine) inj 300 iu/3 ml Levemir flexpen[®] (Insulin detemir) inj 300 iu/3 ml Novomix 30 penfill[®] (Insulin aspart biphasic) inj 300 iu/3 ml Novorapid FlexPen[®] (Insulin aspart)100 u/ml 3 ml Toujeo[®] soln (Insulin glargine) inj 300 iu/ml 1.5 ml</p>
Liposomal forms of drugs (e.g., liposomal amphotericin B)	<p>Ambisome[®](Amphotericin B liposomal) inj 50 mg/vial Lipo-Dox liposome[®] (Doxorubicin) inj 20 mg/10 ml/vial Onivyde[®] (Irinotecan HCl liposome) inj 50 mg/10 ml/vial</p>
Moderate sedation agents, IV	<p>Dianlin[®] (Diazepam) inj 10 mg/2 ml/amp Dupin[®] (Diazepam) inj 10 mg/2 ml/amp Dormicum[®] (Midazolam) inj 5 mg/5 ml/amp Anxicam[®] (Lorazepam) inj 2 mg/1 ml/amp</p>
Moderate sedation agents, oral, for children	<p>Chloral hydrate[®] powder for oral sol 10% 30 ml Chloral hydrate[®] oral soln 100 mg/ml 10% 30 ml</p>
Narcotics/opiates, IV, transdermal and oral (including liquid concentrates, immediate- and sustained- release)	<p>Alfentanil-hameln[®] (Alfentanil) inj 0.5 mg/ml 2 ml(替代 Rapifen) Codeine phosphate[®] (Codeine phosphate) 30 mg/tab Codeine phosphate[®] (Codeine) 15 mg/ml/amp Durogesic[®] D-TRAN patch 12 mcg/hr (Fentanyl 2.1 mg) Durogesic[®] D-TRAN patch 25 mcg/hr (Fentanyl 4.2 mg) Durogesic[®] D-TRAN patch 50 mcg/hr (Fentanyl 8.4 mg) Fentanyl[®] (Fentanyl) inj 0.05 mg/ml 10 ml Fentanyl[®] (Fentanyl) inj 0.05 mg/ml 2 ml Fentanyl[®] Trans patch 2.5 mg/tap (25 mcg/hr) Fentanyl[®] Trans patch 5 mg/tap (50 mcg/hr) Jurnista[®] PR (Hydromorphone HCl) 8 mg/tab Morphine sulfate[®] (Morphine) 15 mg/tab Morphine HCl[®] (Morphine) 10 mg/1 ml/amp Morphine SR FC[®] (Morphine) 30 mg/tab Muaction SR[®] (Tramadol) 100 mg/tab MXL[®] (Morphine) 60 mg/cap (替代 OxyContin) Naldebain[®] (Nalbuphine sebacate) inj 75 mg/ml 2 ml OxyContin[®] CR (Oxycodone HCl) tab 10 mg OxyContin[®] CR (Oxycodone HCl) tab 20 mg OxyNorm[®] IR (Oxycodone HCl) cap 5 mg</p>

	<p>Pethidine® (Meperidine) inj 50 mg/1 ml/amp Painkyl® (Fentanyl citrate 0.31mg/Unit) buccal films 200 mcg Rapifen®(Alfentanil) inj 0.5 mg/ 2 ml/amp Remifentanil® (Remifentanil) inj 2 mg/vial Traceton® (Tramadol 37.5 mg+acetaminophen 325 mg) tab Ultracet® (Tramadol 37.5 mg+acetaminophen 325 mg) tab</p>
Neuromuscular blocking agents	<p>Esmeron® (Rocuronium) inj 50 mg/5 ml/vial Genso® (Atracurium) inj 25 mg/2.5 ml (替代 Nimbex) Cisatracurium® Kabi inj 2 mg/ml 5 ml (替代 Nimbex) Nimbex® (Cisatracurium) inj 2 mg/ml 5 ml Relaxin® (Succinylcholine) inj 500 mg/vial</p>
Parenteral nutrition preparations	<p>Aminol-K® inj 3% 500 ml/bot Aminopoly-H® inj 500 ml (Amino acid 7% + Na 15 mEq) Aminofluid® inj 1000 ml (Amino acid 3% + 7.5 % glucose&electrolytes + Zn) Aminoleban® inj 500 ml (Amino acid 8% + Na 7 mEq + Cl 47 mEq) (取代Aminopoly-H) Amiyu® (Amino acid 7.4%) inj 200 ml Bfluid® inj 1000 ml (Amino acid 3% + 7.5% glucose & electrolytes + Vit B1) (取代Aminofluid) ClinOleic® emulsion (Fat emulsion 20%) inj 20% 250 ml/bg Dipeptiven® (N(2)-L-alanyl-L-glutamine) infusion 100 ml/bot Glycophos® (Sod. Glycerophosphate) infusion 20 ml/vial Lipovenoes® MCT (Fat emulsion 20 %) infusion 20 % 250 ml SMOFlipid® (Fat emulsion 20%) infusion 20% 250 ml SmofKabiven PI® (Amino acid+glucose+lipid) infu 1448 ml Oliclinomel® N7-1000 E (Amino acid+glucose+lipid) infu 1.5 L Oliclinomel® N4-550 E (Amino acid+glucose+lipid) infu 1.5 L</p>
Radiocontrast agents, IV	<p>Dotarem® (Meglumine gadoterate) inj 376.9 mg/ml/60 ml/bot Gadovist® (Gadobutrol) inj 604.72 mg/ml 15 ml/vial Gadovist® (Gadobutrol) inj 604.72 mg/ml 65 ml/vial Iopamiro-300® (Iopamidol) inj 612.4 mg/ml 10 ml/amp Iopamiro-370® (Iopamidol) inj 75.5 g/100 ml/bot Iopamiro-370® (Iopamidol) inj 75.5 g/200 ml/bot Lipiodol ultrafluide® (Ethiodized oil) inj 38% 10 ml/amp Magnevist® (Gadopentetic acid) inj 469 mg/ml/20 ml/vial MultiHance® (Gadobenate dimeglumine) inj 529 mg/ml/20 ml/vial Omnipaque® (Iohexol) inj 35 g Iodine/100 ml/vial Omniscan® (Gadodiamide) inj 0.5 mmol/ml 20 ml Optiray-320® (Ioversal) inj 68% 200 ml/bot Primovist® (Gadoxetic acid disodium) inj 181.43 mg/ml (0.25 mmol/ml) 10 ml/syringe Telebrix-30® (Meglumine and sodium ioxitalamate) inj 30% 100 ml/bot Ultravist-370® (Iopromide) inj 6.9 g/100 ml/bot Urografin® (Meglumine diatrizoate) inj 76% 50 ml/bot Xenetix® 350 (Iobitridol) inj 350 mg iodine/ml, 100 ml/bot</p>
Sterile water for injection, inhalation, and irrigation (excluding pour bottles) in	<p>Sterile water for injection 500ml,1000ml Sterile water for irrigation 2000ml</p>

containers of 100ml or more

Sodium chloride injection, hypertonic, more than 0.9% concentration	Sodium chloride [®] (Sodium chloride) inj 3%, 500 ml/bot Sodium chloride [®] (Sodium chloride) inj 23.5%, 200 ml
---------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------

表二、12 項應提高警覺之特定藥品

ISMP 訂定之 12 項特定藥品	本院現有品項
EPINEPHrine	Epinephrine 驗 (Epinephrine) inj 1 mg/1 ml/amp
Subcutaneous epoprostenol (Flolan), IV	無
Epoprostenol(Flolan), IV	無
Magnesium sulfate injection	Magnesium sulfate [®] (Magnesium sulfate) inj 10%, 20 ml/amp Magnesium sulfate [®] (Magnesium sulfate) inj 10%, 200 ml/bot
Methotrexate, oral, non-oncologic use	Methotrexate [®] (Methotrexate) 2.5 mg/tab
Oxytocin, IV	Oxocin™T.F.™ [®] (Oxytocin) inj 10 iu/1 ml Oxytocin [®] (Oxytocin) inj 10 iu/1 ml (替代 Oxocin) Duratocin [®] (Carbetocin) inj 100 mcg/1 ml
Nitroprusside, sodium, for injection	無
Potassium chloride for injection concentrate	Pot chloride [®] (Potassium chloride) inj 15%, 20 ml
Potassium phosphate injection	Potassium phosphate [®] (Potassium phosphate) inj 20 ml/amp
Vasopressin, IV or intraosseous	Minirin [®] (Desmopressin, DDAVP) inj 4 ug/ml 1 ml Glypressin [®] (Terlipressin) inj 1 mg, 5 ml Pitressin [®] (Vasopressin)inj syn. aq 20 u/1 ml

註：若有紅字標示部分即為新修訂品項